

In the Specification:

The following amendments are intended to correct several grammatical and clerical errors which may have resulted from the translation of the original application into English. For the Examiner's convenience, a Substitute Specification incorporating these amendments is appended hereto.

Before the paragraph beginning on line 1 of page 1, please insert the following heading:

Background of the Invention

Please amend the paragraph beginning on line 12 of page 1 as follows:

It is an object of the invention to provide an improved penetrator which is particularly suitable for use in connection with a power supply. It is a particular object of the invention to ~~produce~~ provide a penetrator[[,]] which connects a control unit at low pressure with a motor unit at high pressure and which is intended for use in subsea installations, such as, for example, in connection with the recovery of hydrocarbons.

Please delete the paragraph beginning on line 17 of page 1.

Before the paragraph beginning on line 20 of page 1, please insert the following heading:

Summary of the Invention

Please amend the paragraph beginning on line 20 of page 1 as follows:

In a preferred embodiment, the invention concerns a device for the feedthrough of an electrical conductor from one area to another area. The two areas are preferably at different pressures, ~~where the device comprises~~ and are

separated by a base plate~~[[/]]~~ or a dividing plate through which at least one penetrator is passed. The devices is characterised in that the at least one penetrator comprises~~[[; -]]~~ a bore for receiving a conductor, for example a copper conductor, ~~[[-]]~~ a first part with a first shoulder surface, ~~and~~ a second part with a second shoulder surface, wherein the shoulder surfaces are designed to abut against each side of the base plate, and ~~[[-]]~~ at least one spring device which is arranged to keep the shoulder surfaces clamped against the base plate.

Please amend the paragraph beginning on line 31 of page 1 as follows:

The device may also comprise at least one shrink sleeve ~~for connection by which it may be connected~~ to an external cable, ~~and the device may also comprise external~~ a pair of protective cases sleeves which are mounted at to each end of the device. In a further embodiment of the invention, the device may comprise a nut for pretensioning ~~of~~ the spring device. The nut may be screwed into onto the end of the conductor.

Please amend the paragraph beginning on line 36 of page 1 as follows:

Further, the invention relates to an underwater electrical actuator comprising a motor unit and a control unit. The motor unit is at ambient pressure and the control unit is at atmospheric pressure. The electrical actuator also comprises a base plate or a dividing plate between the control unit and the motor unit through which one or more penetrators are passed ~~being mounted between the control unit and the motor unit~~.

Please amend the paragraph beginning on line 4 of page 2 as follows:

The electrical actuator is characterised in that each penetrator comprises ~~[[1]]~~ a bore for receiving a conductor, for example a copper conductor, ~~[[1]]~~ a first part with a first shoulder surface, ~~and~~ a second part with a second shoulder surface, wherein the shoulder surfaces are designed to abut against each side of the base plate, and ~~[[1]]~~ at least one spring device which is arranged to keep the shoulder surfaces clamped against the base plate.

Before the paragraph beginning on line 14 of page 2, please insert the following heading:

Brief Description of the Drawings

Please amend the paragraph beginning on line 16 of page 2 as follows:

~~fig.~~ Fig. 1 is a partly exploded view of the actuator.

Before the paragraph beginning on line 22 of page 2, please insert the following heading:

Detailed Description of the Preferred Embodiments

Please amend the paragraph beginning on line 31 of page 2 as follows:

The housing 2 is sealed against the environment and preferably filled with a hydraulic fluid which is compensated for the ambient pressure. In order to achieve this, a pressure compensator device 15 is mounted on the housing 2 ~~for~~ ~~pressure compensation. This~~ and is fixed by means of bolts to a flange on the housing ~~[[1]]~~. The pressure compensator 15 is of a commonly known type where a membrane is influenced on one side by the surrounding sea water and on the other side by the said fluid in the housing 2. The arrangement ensures that the

fluid in the housing 2 is at all times under the same pressure as the ambient pressure.

Please amend the paragraph beginning on line 1 of page 3 as follows:

The housing 2 includes a handle 3 which can be operated by a remotely operated underwater vehicle (ROV). A coupling half 6 of an electrical coupling is also mounted on the housing. ~~It~~ The coupling half 6 is designed to cooperate with a corresponding coupling half 7 that can be operated by an ROV. Through ~~the~~ this coupling, wires are passed for ~~power~~ the supply of power as well as communication signals ~~for communication~~ to the motor unit 1. ~~From~~ A cable (not shown) which extends from the coupling half 7 ~~there extends a cable (not shown)~~ which is connected to a battery (not shown) for the supply of power ~~supply~~ ~~together with~~ and to a unit (not shown) for the communication of signals to the motor unit 1.

Please amend the paragraph beginning on line 33 of page 4 as follows:

In the control unit 11, electronics ~~(illustrated schematically by 11)~~ are provided for controlling the motor, ~~and~~ for receiving and transmitting signals to a remotely located control station, and for sensing the condition of the motor and the ~~valve's position~~ of the valve. The housing 13 for the control unit 11 is filled with nitrogen under atmospheric pressure, i.e. 1 bar. The nitrogen gas is inert and helps to protect the electronic components inside the housing, according to normal practice. To ensure a seal in the connection between the flange 9 and the housing 13, O-rings 70, 71 are provided.

Please amend the paragraph beginning on line 3 of page 5 as follows:

Through the base plate 10 ~~there~~ extend a number of holes which are arranged to receive and pass through corresponding penetrators 101-105 for the feedthrough of cables supplying power to the motor. An additional hole receives a second penetrator 106 for feedthrough of signals between the motor unit and the control unit. The penetrator 106 is of a common multipin type where the wires are embedded in glass for protection. The base plate 10 further comprises a filler port 107 and a test port 108. The test port 108 is connected with a channel 63 and is employed for injecting an inert gas, preferably helium, under pressure in order to test the seals 72, 73. The test port also tests the seals ~~round~~ around the penetrator, which will be described in greater detail later. The filler port ~~497~~ 107 is used for filling the ~~instrument~~ housing 13 with nitrogen when preparing the unit for lowering to the subsea installation. A breaking pin 109 is also provided which is arranged to be broken if the pressure in the housing 13 exceeds the pressure in the actuator housing 2. It works by opening a port between the two units in order to bleed off the pressure in the housing 13. This may happen particularly if fluid from the motor housing leaks into the ~~control unit~~ housing 13 during the actuator's stay on the seabed. During recovery of the equipment, the pressure in the housing 13 may become so great that there is a risk of the cover being blown off when the screws 65 are loosened. When the breaking pin is activated the housing 13 can be emptied of overpressure fluid.

Please amend the paragraph beginning on line 22 of page 5 as follows:

The penetrators 101-105 are designed to transfer high-voltage current between the control unit 11 and the motor. As illustrated in fig. 5, five such

penetrators, which are marked 101-105, are provided, three of which are designed to supply three-phase current (1 per phase) from the current supply and two of which are designed to supply direct current to the motor.

Please amend the paragraph beginning on line 27 of page 5 as follows:

We shall now refer to fig. 6, which illustrates the penetrator in greater detail. Each penetrator comprises an insulator sleeve 111 ~~with~~ which includes a through-going bore 120 that is designed to receive and pass through an electric conductor, e.g. a copper conductor, ~~and with~~ a first portion 112 and a second portion 113 with that has a larger diameter than the first portion. The second portion 113 has a lower end surface 124 and an upper end surface that forms a shoulder surface 114. An attachment sleeve 116 has an internal bore 151 whose diameter is equal to the diameter of the first portion 112 of the insulator sleeve 111, thus enabling the sleeve to be fitted with little clearance ~~on to~~ onto the first portion 112 of the insulator sleeve 111. The attachment sleeve 116 has a lower end surface that forms a shoulder surface 117 and an upper end surface which is undercut to form a recess 152. The outer diameter of the sleeve 116 is equal to the diameter of the second portion 113 of the insulator sleeve 111, with the result that when the parts are assembled, a bushing sleeve in the form of a reel is obtained. In the transition between the shoulder surfaces 114 and 117 respectively, O-rings 118 and 119 respectively are mounted for sealing between the insulator sleeve and the base plate 10. The insulator sleeve 111 is preferably made of an insulating material, such as a ~~peek~~ PEEK-type material.

Please amend the paragraph beginning on line 12 of page 6 as follows:

~~Around~~ A rubber or other type of protective sleeve 126 is fitted over the end portion 113, the flange 122 and the receiving portion 123 ~~a rubber sleeve 126 or other type of protection is shrunk on~~ in order to enclose and protect ~~the~~ these parts. ~~An~~ In addition, an O-ring 127 is mounted between the flange 125 and the end surface 124.

Please amend the paragraph beginning on line 15 of page 6 as follows:

The recess 152 of the sleeve 116 is designed to receive a spring device. ~~This~~ The spring device comprises an O-ring 147, a spring washer 141, a spring 142 and a retainer washer 143. The retainer washer ~~142~~ 143 abuts against the upper end surface of the attachment sleeve 116. A nut 144 can be screwed ~~into~~ onto the threads 128 after mounting the spring device in order to join the parts together, while at the same time the spring is compressed until the retainer washer 143 abuts against the upper end of the attachment sleeve 116.

Please amend the paragraph beginning on line 22 of page 6 as follows:

The penetrator is assembled as follows. First, ~~of all~~ the O-ring 119 is inserted ~~in~~ onto the portion 112 of the insulator sleeve until it abuts against the shoulder 114. The insulator sleeve is then passed through the bore in the base plate 10. The O-ring 127 is fitted ~~on to~~ onto the copper conductor and the copper conductor is passed through the bore 120 until the flange 125 abuts against the end 124 of the insulator sleeve. The O-ring 118 is pushed ~~to~~ onto the end of the portion 112 until it abuts against the base plate 10. The attachment sleeve 116 is now pushed over the conductor until it abuts against the base plate 10. The O-ring 147, the spring washer 141, the spring 142 and

the retainer washer 143 are mounted and the nut 144 is screwed ~~into~~ onto the conductor until the retainer washer abuts against the upper edge of the attachment sleeve 116. A shrink sleeve 145 that extends to the control unit can now be screwed ~~on to~~ onto the end of the conductor 121. A conductor for a cable can now be soldered or shrunk ~~on to~~ onto the shrink sleeve 145.

Please amend the paragraph beginning on line 35 of page 6 as follows:

Finally, the protective sleeves 126, 145 146 are shrunk ~~on to~~ onto the outside of the upper and lower parts of the penetrator.

Please amend the paragraph beginning on line 7 of page 7 as follows:

This is repeated for all the penetrators, and the cables that are attached to the end of their respective conductors can now be attached to contacts in the control unit 11. At the same time, the penetrator 106 is passed through the base plate 10 and connected to the motor and the control unit, respectively. The cover housing 13 is then attached to the flange 9.